

REMARKS

In response to the above Office Action, claims 1-15 have been amended to avoid improper multiple dependency, to use Markush language where appropriate, to delete improper phrases, to more clearly claim the invention, and to place the claims in more traditional U.S. format.

In the Office Action, the Examiner rejected claims 1-3 and 5 under 35 U.S.C. §102(b) for being anticipated by U.S. Patent No. 5,834,393 to Jacobsen et al. (hereafter Jacobsen). In addition, claims 1-2, 5, and 6 were rejected under §102(b) for being anticipated by WO 99/28353 and claims 1-4 under §102(e) for being anticipated by U.S. Patent No. 6,548,443 to Watanabe et al. (hereafter Watanabe).

The essence of the present invention as set forth in amended claim 1 is that the organometallic compound is added to the reactor as a separate component to the already prepared or activated catalyst system including (a) the polymerization catalyst and (b) the ionic activator.

The organometallic may be added as a separate component directly to the reactor or more preferably it may be injected into the reactor together with the activated catalyst system. For example, the organometallic compound may be premixed with the activated catalyst system before its addition to the reactor. (See page 3, line 32 to page 4, line 4 and claim 9). All of the examples in the application support this preferred method of addition of the organometallic compound to the reactor. The process results in improved poison scavenging as well as advantages in activity profiles, catalyst activity, and product characteristics.

The Examiner points out that in Jacobsen the catalyst composition used in the olefin polymerization includes not only a metallocene as a catalyst and an ionic

activator, but aluminum compounds, such as aluminoxane which is an organometallic compound within the scope of those claimed. However, in Jacobsen, including the examples, the aluminoxane is only used in the preparation of the activated catalyst. Nowhere does the reference teach the claimed step of adding the organometallic compound to the reactor as a separate component to the activated catalyst. Accordingly, it is submitted that the noted claims cannot be considered to be anticipated by Jacobsen, and its withdrawal as a ground of rejection under §102(b) is therefore requested.

Similarly in WO 99/28353 in Example 8, a triethylaluminum treated silica is impregnated by a borate followed by treatment with diethylaluminum ethoxide and a metallocene. The ethoxide may be an organometallic compound within the scope of those claimed, but it is used in the preparation of the catalyst. Hence it is part of the activated catalyst system. In contrast to the present invention, nowhere does the reference teach the claimed step of adding the organometallic compound to the reactor as a separate component to the activated catalyst. In this regard, see the discussion of this difference between this reference and the present invention on page 2, lines 16-22, and, in particular, the sentence on lines 18-20 of the specification.

Accordingly, it is submitted that the noted claims cannot be considered anticipated by WO 99/28353, and its withdrawal as a ground of rejection under §102(b) is therefore also requested.

In Watanabe, the Examiner refers to Example 6. Here also, as in the other two references, an olefin polymerization catalyst is prepared by contacting a transition metal compound with an aluminum oxy compound modified with a compound having a

hydroxyl group, an organoaluminum compound, and a borate activator. These four components are used together as the olefin polymerization catalyst. Nowhere does it disclose separately contacting an organometallic compound with this already prepared and activated polymerization catalyst either before or after it is injected into the reactor as required by applicants' claims.

Accordingly, it is submitted that the noted claims are not anticipated by Watanabe either. Its withdrawal as a ground of rejection under §102(e) is therefore requested.

It is believed claims 1-15 are now in condition for allowance.


In view of the foregoing amendments and remarks, applicants respectfully request reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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